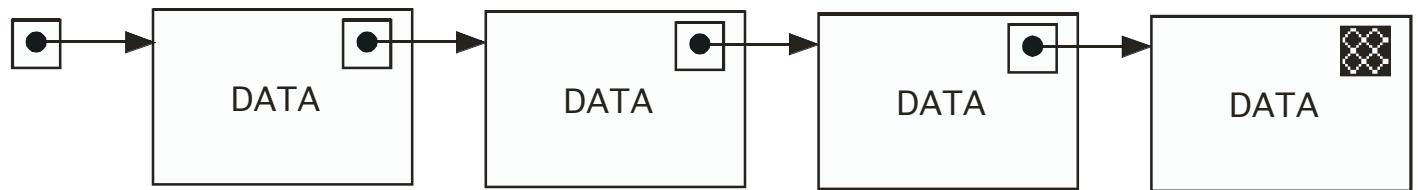


merge sort on lists:

length = 4

head:



Mergesort(head,length)

IF length=1 **THEN RETURN** head

pos \leftarrow head

FOR k \leftarrow 1 **TO** (length **div** 2-1)

• pos \leftarrow pos.next

tete \leftarrow pos.next

pos.next \leftarrow null

Mergesort(head,length **div** 2)

Mergesort(tete,length-length **div** 2)

RETURN Merge(head,tete)

Merge(neaa,tete)

IF tete.data<head.data

THEN out \leftarrow tete; posa \leftarrow tete; posb \leftarrow head

ELSE out \leftarrow head; posa \leftarrow head; posb \leftarrow tete

WHILE posa.next \neq null and posb \neq null **DO**

IF posb.data<posa.next.data **THEN**

- small \leftarrow posb
- posb \leftarrow posb.next
- small.next \leftarrow posa.next.next
- posa.next \leftarrow small

posa \leftarrow posa.next

IF posb \neq null **THEN** posa.next \leftarrow posb

RETURN out

WHILE posa.next \neq null and posb \neq null **DO**

IF posb.data<posa.next.data **THEN**

- small \leftarrow posb
- posb \leftarrow posb.next
- small.next \leftarrow posa.next.next
- posa.next \leftarrow small

posa \leftarrow posa.next

/ IF posb=null whe are already done */*

/ IF posb \neq null **THEN** posa.next=null*

THEN posa.data<posb.data

THEN “posa.next \leftarrow posb” **will preserve order** */

IF posb \neq null **THEN** posa.next \leftarrow posb